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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,659	02/15/2006	Carl Towns	3724.1008-000	5024
21005	7590	05/06/2009	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			NGUYEN, KHANH TUAN	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			05/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,659	TOWNS ET AL.	
	Examiner	Art Unit	
	KHANH T. NGUYEN	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 March 2009.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 24-47 is/are pending in the application.
- 4a) Of the above claim(s) 31-40, 45 and 46 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 24-30, 41-44 and 47 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Final

Response to Amendment

1. The amendment filed on 03/20/2008 is entered and acknowledged by the Examiner. Claims 24-46 and newly added claim 47 are currently pending in the instant application with claims 31-40 and 45-46 withdrawn from further consideration. Claims 1-23 have been canceled.

Claim Status

2. The rejection of claims 24-30 and 41-43 under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 6,309,763 B1 (Woo) is maintained for the reasons therein. The rejection of claims 24-30 and 41-43 under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 5,728,801 (Wu) is maintained for the reasons therein. The rejection of claims 24-30 and 41-43 under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. 7,351,788 B2 (O'Dell) is maintained for the reasons therein. The rejection of claims 44 under 35 U.S.C. 103(a) as being unpatentable over either U.S. Pat. 6,309,763 B1 (Woo), U.S. Pat. 5,728,801 (Wu) or U.S. Pat. 7,351,788 B2 (O'Dell) in view of U.S. Pat. 6,630,566 B1 (Allen) is maintained for the reasons therein.

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3. The newly independent claim 47 has been noted by the Examiner. However, the instant claim remain unpatentable for the same reasons as set forth in the Office Action mailed on 11/14/2008 over the prior art of record.

(Previously Rejected)

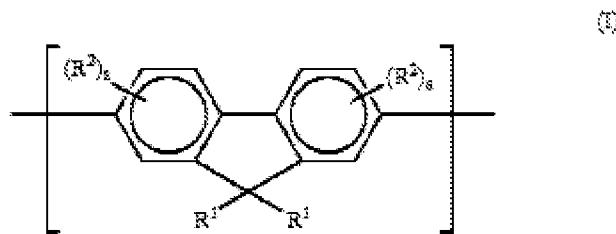
Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. The Examiner would like to note that claims 24-27, 30, and 47 contains the “optional” languages, such as “*if*” and “*optionally substituted*”, which are considered an alternative component or alternative substitution and the prior art need not teach the optional component or substitution to be anticipatory.

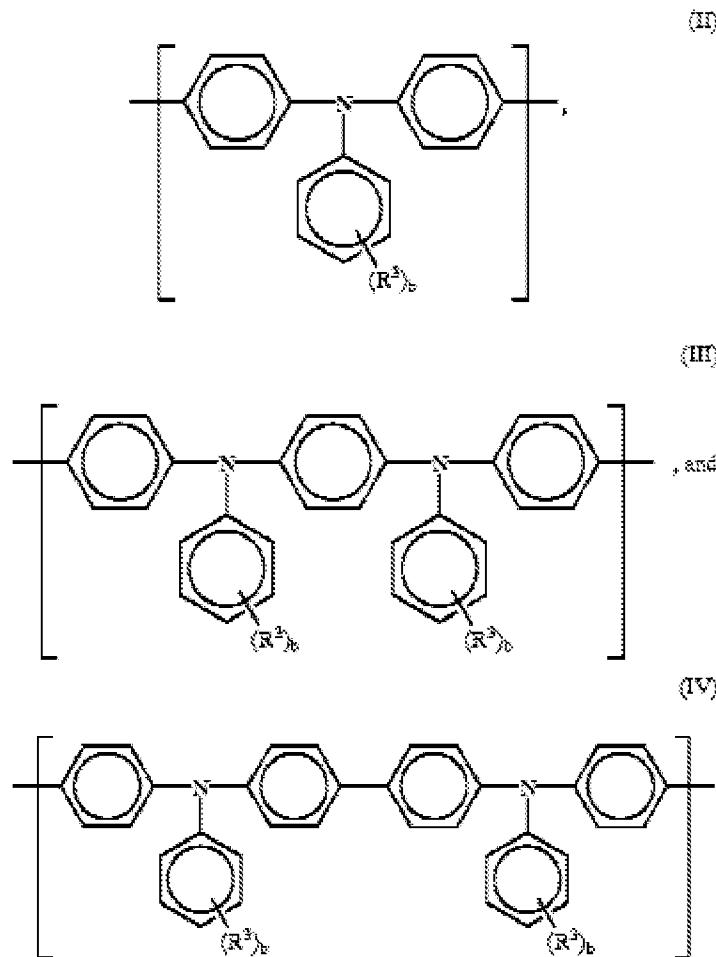
6. Claims 24-30, 41-43, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 6,309,763 B1 (hereinafter Woo).

Woo teaches a polymer comprising of 10-90 wt. % of a conjugated group of Formula (I):



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and 10-90 wt. % of conjugated groups selected from Formulas (II), (III), (IV) and the mixture thereof (Abstract and Col. 1, line 30 to Col. 2 line 27):



The conjugated groups of Formulas (II) and (III) of Woo are readable on the first repeating unit when each E is a nitrogen, each Ar^1 , Ar^2 and Ar^3 is the same or different and independently represent an aryl such as a phenyl, and n is zero and one, respectively. The conjugated group of Formula (I) of Woo is different from the first repeating unit of Formulas (II) and (III) of Woo, thus is considered a second repeating unit. Woo further teaches said polymer is useful in optical devices such as

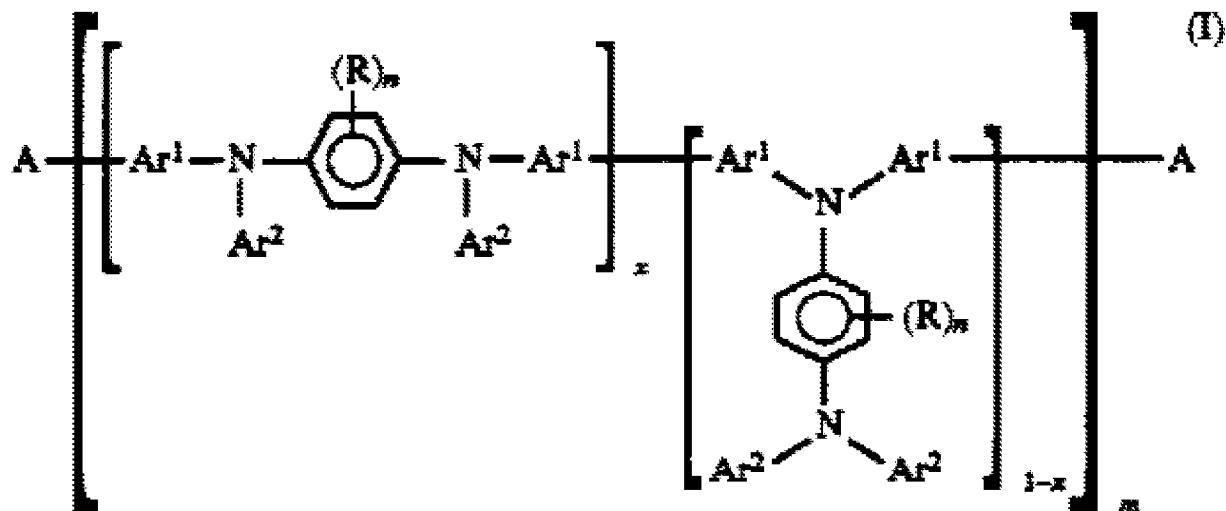
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electroluminescent (EL) device (Col. 2, lines 45-52). The organic polymer film may be arranged between an anode material and a cathode material (Col. 2, lines 34-44).

The reference specifically or inherently meets each of the claimed limitations in their broadest interpretations. The reference is anticipatory.

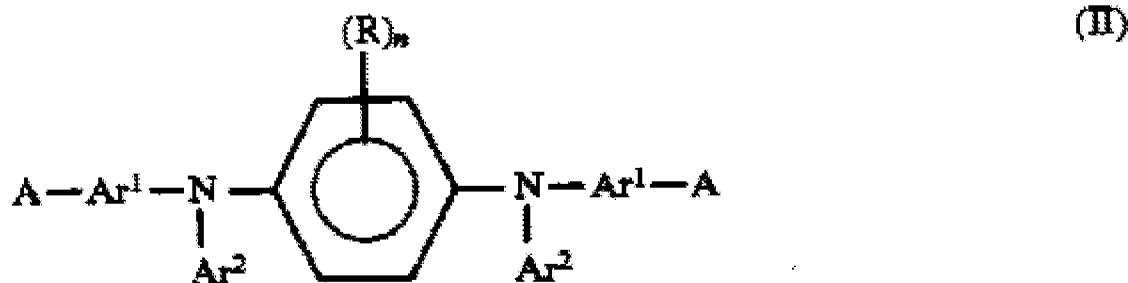
7. Claims 24-30, 41-43, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 5,728,801 (hereinafter Wu).

Wu teaches a poly(arylamine) composition comprising of one or more compound of Formula (1) wherein Ar¹ and Ar² are independently C₆₋₁₈ aryl moiety and A is H or a halogen (Col. 2, lines 5-35).

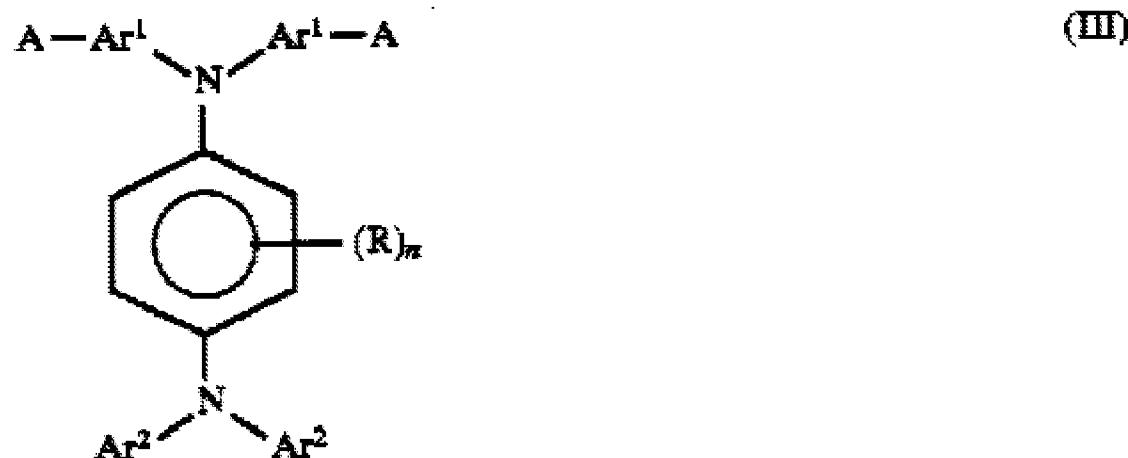


The poly(arylamine) composition is prepared by bounding about 5 to about 100 monomers illustrated in Formulas (II) and (III) (Col. 3, line 53 to Col. 4, line 16):

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and

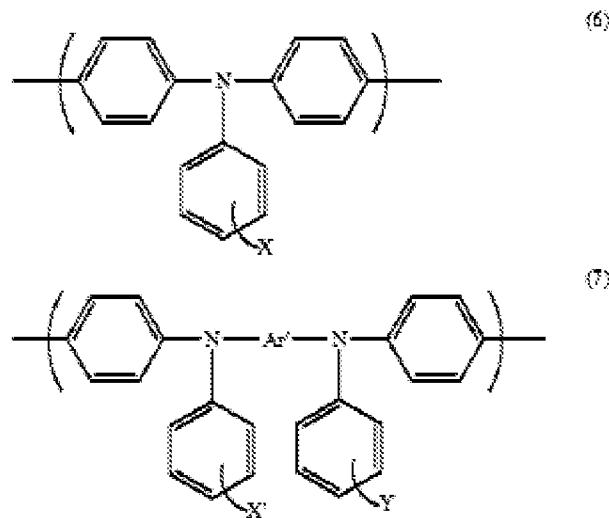


The monomer of Formulas (II) of Wu is readable on the first repeating unit when each E is a nitrogen, each Ar^1 is the same or different and independently represent an aryl such as a phenyl, and n is zero. The monomer of Formulas (II) of Wu is readable on the second repeating unit when the second repeating unit is the same as the first repeating unit. Wu further teaches said polymer is useful in optical devices such as electroluminescent (EL) device (Col. 1, lines 5-55). The organic polymer film may be arranged between an anode material and a cathode material (Col. 1, lines 35-55).

The reference specifically or inherently meets each of the claimed limitations in their broadest interpretations. The reference is anticipatory.

8. Claims 24-30, 41-43, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. 7,351,788 B2 (hereinafter O'Dell).

O'Dell teaches a method for making a polymer that may contain a first repeat unit of formulas (6) and (7):



and a second repeat unit that is the same or different from the first repeat unit and comprises a substituted or unsubstituted, aryl or heteroaryl group (Abstract and Col. 5, lines 38-68). The first repeat unit of Formulas (6) and (7) O'Dell is considered a first repeat unit when each E is a nitrogen, each Ar¹, Ar² and Ar³ is the same or different and independently represent an aryl such as a phenyl, and n is zero and one, respectively. O'Dell further teaches said polymer is useful in optical devices such as electroluminescent (EL) device (Col. 1, lines 10-15). The organic polymer film may be arranged between an anode material and a cathode material (Col. 1, lines 16-27).

The reference specifically or inherently meets each of the claimed limitations in their broadest interpretations. The reference is anticipatory.

(Previously Rejected)

Claim Rejections - 35 USC § 103

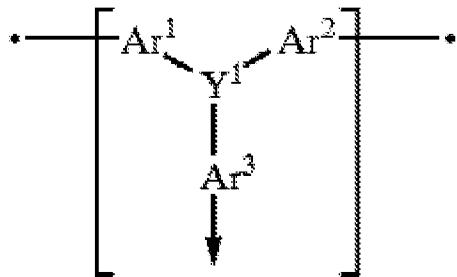
9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over either U.S. Pat. 6,309,763 B1 (Woo), U.S. Pat. 5,728,801 (Wu) or U.S. Pat. 7,351,788 B2 (O'Dell) as applied to the above claims, and further in view of U.S. Pat. 6,630,566 B1 (hereinafter Allen).

Woo, Wu, and O'Dell are relied upon as set forth above. With respect to instant claim 44, Woo, Wu and O'Dell did not disclose a switching device comprising of an oligomer or polymer according to claim 24.

In an analogous art, Allen discloses a polymeric material comprising of at least one repeating unit represented by Formula (I) wherein Y¹ may be N or P and Ar¹, Ar² and Ar³ may be aromatic groups (Abstract and Col. 12, lines 27-63).

Formula 1



The repeating unit of Formulas (I) of Allen is similar to the first repeating unit as claimed when each E is a N or P, each Ar^1 is the same or different and independently represent an aryl such as a phenyl, and n is zero. Allen discloses the polymeric material may comprise of a plurality of repeating units (Col. 12, lines 27-30). As a result, the second or three repeating units may be the same or different from Formula (I) of Allen depending on the substitution of Y^1 , Ar^1 , Ar^2 and Ar^3 . Thus, Allen polymer material is similar to the polymeric composition of Woo, Wu and O'Dell. Allen also discloses the said polymeric material may be used in optical devices such as electroluminescent device as suggested by Woo, Wu and O'Dell and switching devices such as transistors (Col. 14, lines 6-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the polymeric composition of Woo, Wu and O'Dell into a switching device as suggested by Allen because such utility is expressly suggested by the prior arts. The burden is upon the applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

11. In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

Response to Arguments

12. Applicant's arguments filed on 03/20/2009 have been fully considered but they are not persuasive.

13. In response to the Applicant's remark on pages 8-15, Applicant argues that the prior art of record failed to suggest at least one E to be phosphorous as required by the instant invention. Specifically, Applicant argues that the Woo reference require that each E is nitrogen, in contrast with the current application, which requires at least one E to be phosphorus. Therefore, repeating units of Formulas (II) and (III) of Woo do not anticipate independent Claim 24 of the instant application. (See page 9, 2nd paragraph). Similarly, Applicant argues that Wu reference and O'Dell reference does not teach or suggest at least one E to be phosphorus. (See page 12, 1st and 2nd paragraph and See page 13, 1st and 2nd full paragraph).

Claim 24, recited in parts "...each E independently represents optionally substituted nitrogen or optionally substituted phosphorus, with the proviso that at least one E is optionally substituted phosphorus; each Ar¹, Ar² and Ar³ is the same or different and independently represents an optionally substituted aryl or heteroaryl; n is an integer from 0 to 3..." (Emphases Added).

The Examiner respectfully disagrees with the Applicant argument. At stated at point 6 in the Office Action mailed on 11/14/2009 and again at point 5 above, the “optional” language, such as “*optionally substituted*”, is considered an alternative component or alternative substitution and the prior art need not teach the optional component or substitution to be anticipatory. Therefore, Woo, Wu, and O’Dell need not teach or suggest at least one E to be phosphorus to be anticipate the instant invention because such as substitution is optional.

14. Applicant further argues, on page 14, that Allen does not disclose specific examples of phosphorous containing polymers. Therefore, Allen reference does not remedy the deficiencies of Woo, Wu, or O’Dell over the claimed subject matter. The Examiner respectfully disagrees with the Applicant argument for the same reason set forth at point 13. Woo, Wu, and O’Dell are considered to teach or suggest the claimed subject matter because the prior art need not teach or suggest at least one E to be phosphorus since the phosphorous substitution is optional. Thus, Allen need not remedy the deficiencies of Woo, Wu, or O’Dell over the claimed subject matter. Furthermore, Allen need not teach or suggest specific examples of phosphorous containing polymers to render the instant invention obvious since a polymer not need contain a phosphorous substitution.

15. Based on the above rational, it is believed that the claimed limitations are met by the reference submitted and therefore, the rejection is maintained.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH T. NGUYEN whose telephone number is (571) 272-8082. The examiner can normally be reached on Monday-Friday 7:00-4:00 EST PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Kopec/
Primary Examiner, Art Unit 1796

/KTN/
Examiner
04/28/2009